

Core Precalculus

Q3 Lesson Plans

Date	
Topic	
Textbook reference	
Vocabulary	
Objectives/Sequence	
Notes	
HW	

Week of 10-14 January

Date	Monday 1/10/2011
Topic	Intro to trig
Textbook reference	6.1, 6.2
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Special triangles • Angles as rotations • Radian measure • Unit circle trig
Notes	<p>Omit degrees, minutes, seconds, and arc length, sector area</p> <p>Go over exam first</p>
HW	<p>HW#1</p> <p>Page 361 # 13-19 odd, 35-55 (4n-1)</p> <p>Page 378 # 11, 13</p>

Date	Wednesday 1/12/2011
Topic	Unit circle trig (continued)
Textbook reference	6.2 (continued)
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Use the unit circle to find the trig values for angles that are multiples of $\pi / 6$, $\pi / 4$, $\pi / 3$ • Use the unit circle to find the trig values for quadrantal angles
Notes	
HW	<p>HW#2</p> <p>Page 378 # 19-61 odd, 109, 112</p>

Date	Friday 1/14/2011
Topic	Properties of trig functions
Textbook reference	6.3
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Signs of trig functions in the different quadrants – All students take calculus • Periodic properties (informal) • Opposite angle • Finding remaining trig functions from given info • Simplifying expressions
Notes	Through Question 8 for Tuesday's quiz
HW	HW#3 Page 393 # 11-87 (4n-1)

Week of 17-21 January

Date	Tuesday 1/18
Topic	Graphs of sin and cos functions $y = a \sin bx$ and $y = a \cos bx$ only
Textbook reference	6.4
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Sin and cos as circular functions – make an accurate graph • Amplitude and period
Notes	Non-calculator quiz
HW	HW#4 Page 406 # 9-81 ($4n+1$)

Date	Thursday 1/20
Topic	Graphs of sin and cos functions (including shifts)
Textbook reference	6.6
Vocabulary	Phase shift
Objectives/Sequence	<ul style="list-style-type: none"> • Horizontal or vertical shift alone • Multiple transformations
Notes	
HW	HW#5 Page 427 # 3-17 odd

Week of 24-28 January

Date	Monday 1/24
Topic	Sinusoidal models
Textbook reference	6.6
Vocabulary	Sinusoid
Objectives/Sequence	<ul style="list-style-type: none"> • Temperature example <ul style="list-style-type: none"> ◦ Finding amp, v.s., pd, p.s • Other examples • Compare to sine regression
Notes	
HW	HW#6 Page 427 # 4-16 mult of 4, 27-37 odd

Date	Wednesday 1/26 (8 pd day – 40 min class)
Topic	Ch 6 Review
Textbook reference	6.1 – 6.4, 6.6
Vocabulary	
Objectives/Sequence	
Notes	
HW	

Date	Thursday 1/27 (CNY assembly – 60 min class)
Topic	Ch 6 Test
Textbook reference	
Vocabulary	
Objectives/Sequence	
Notes	
HW	

Week of 9-11 February

Date	Wednesday 2/9
Topic	Other trig functions and graphs
Textbook reference	6.5
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Tan/Cot functions – basic properties • $y = a \tan bx$ and $y = a \cot bx$ • Sec/Csc functions – basic properties • Other sec/csc graphs
Notes	No shifts for tan/cot graphs
HW	HW#7 Page 417 # 7-21 odd, 31, 35, 39 Page 427 # 6, 10, 14, 32

Date	Friday 2/11
Topic	Inverse trig functions
Textbook reference	7.1
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Inverse sine, cosine, tangent – restricted domain • Value problems • Functions involving inverse sin, cos, tan
Notes	
HW	HW#8 Page 451 # 13-23 odd, 53-65 odd

Week of 14-18 February

Date	Tuesday 2/15
Topic	Catch-up/extra practice
Textbook reference	
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none">• Sine/cosine functions• Other trig functions• Inverse trig function
Notes	
HW	HW#9 Page 434 # 53, 58, 67-77 odd Page 451 #14-24 even

Date	Thursday 2/17
Topic	Trig identities
Textbook reference	7.3
Vocabulary	Identity
Objectives/Sequence	<ul style="list-style-type: none">• Review Pythagorean, even-odd identities• Simplifying trig expressions• Establishing trig identities
Notes	
HW	HW#10 Page 464 # 11-55 (4n-1) Page 427 # 18, 25, 28, 34

Week of 21-25 February

Date	Monday 2/21
Topic	Sum and difference formulas
Textbook reference	7.4
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Show trig functions not distributive • Common problems
Notes	Quiz first Collect HW 6-10 No tangent sum and difference problems
HW	HW#11 Page 473 # 11-31 ($4n-1$), 37, 45, 47, 57 Skip all tangent problems

Date	Wednesday 2/23 (local coordinators' meeting – leave early?)
Topic	Double angle formulas
Textbook reference	7.5
Vocabulary	
Objectives/Sequence	
Notes	No half-angle problems Discuss course selection
HW	HW#12 Page 482 # 7ab, 11ab, 15ab, 47-55 odd, 83

Date	Friday 2/25
Topic	Trig equations
Textbook reference	7.7
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none"> • Solving on an interval • General solution • Calculator questions involving inverse trig, reference angles
Notes	Rushed through last part, need to go over again
HW	HW#13 Page 492 # 7-59 ($4n-1$)

Week of 28 February – 4 March

Date	Tuesday 3/1
Topic	Trig equations cont'd
Textbook reference	7.8
Vocabulary	
Objectives/Sequence	<ul style="list-style-type: none">• Trig equations, quadratic type• w/identities• Calculator questions involving inverse trig, reference angles
Notes	
HW	HW#14 Page 501 # 5-23 odd Page 504 # 41, 76, 81abef

Date	Thursday 3/3
Topic	Ch 7 Review
Textbook reference	
Vocabulary	
Objectives/Sequence	
Notes	
HW	

Week of 7-11 March

Date	Monday 3/7
Topic	Ch 7 Test
Textbook reference	
Vocabulary	
Objectives/Sequence	
Notes	
HW	

Date	Wednesday 3/9
Topic	Law of Sines, Law of Cosines
Textbook reference	8.2, 8.3
Vocabulary	Solving a triangle
Objectives/Sequence	<ul style="list-style-type: none"> • Review formulas • Problems • Connect to triangle congruence methods • Solving triangles • Word problems
Notes	Students are very happy to see this topic and feel confident about it.
HW	HW#15 Page 530 # 9-21 ($4n+1$), 37, 39, 47 Page 537 # 11-23 ($4n-1$), 43, 45

Date	Friday 3/11
Topic	Ambiguous Case
Textbook reference	8.2
Vocabulary	Ambiguous case
Objectives/Sequence	<ul style="list-style-type: none"> • What and how • 1, 2, 0 possible triangles • Given angle obtuse
Notes	No BAH test (sorry Carolyn), focus on using Law of Sines to determine the possibilities Understand the difference between the two steps with 180 - something
HW	HW#16 Page 530 # 25-33 odd Page 537 # 33, 35, 37, 50

Week of 14-18 March

Date	Tuesday 3/15
Topic	Area of a Triangle
Textbook reference	8.4
Vocabulary	Semi-perimeter
Objectives/Sequence	<ul style="list-style-type: none"> • $Area = \frac{1}{2}ab \sin C$ • Heron's formula
Notes	
HW	HW#17 Page 543 # 5-37 (4n+1)

Date	Thursday 3/17 (in Melbourne for IBAP Conf, Laurie to cover)
Topic	Ch 8 Quiz/Ch 7 2 nd chance assessment
Textbook reference	
Vocabulary	
Objectives/Sequence	
Notes	
HW	